

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Previously Presented): A method of forming a polarizing material comprising the steps of:

- (a) forming a layer of a photochemically stable dichroic absorber on a substrate,
- (b) exposing said layer to activating light illumination to provide an ordered structure with a distinguished absorption axis, and
- (c) polymerizing said layer.

Claim 2 (Previously Presented): A method as claimed in claim 6 further comprising polymerising said layer.

Claim 3 (Original): A method as claimed in claim 1 wherein different regions are polarized by activating radiation with different polarization axes so as to produce regions of said polarizing material with differing axes of polarization.

Claim 4 (Original): A method as claimed in claim 3 wherein regions of said layer are exposed independently by the use of masks to isolate selected regions for exposure.

Claim 5 (Original): A method as claimed in claim 3 wherein a birefringence mask is used to create activating radiation with a selected spatial distribution of polarization vectors.

Claim 6 (Previously Presented): A method of forming a polarizing material comprising the steps of:

- (a) forming a layer of a photochemically stable dichroic absorber on a substrate,
- (b) providing said layer with a coating to change its spectral response, and
- (c) exposing said layer to activating light illumination to provide an ordered structure with a distinguished absorption axis.

Claim 7 (Original): A method as claimed in claim 6 wherein different regions of said layer are formed with different coatings to produce a multi-color polarizing material.

Claim 8 (Original): A method as claimed in claim 1 comprising forming a plurality of said layers on said substrate with said layers being separated by isolation layers.

Claim 9 (Original): A method as claimed in claim 1 wherein said activating radiation is polarized or non-polarized, but directed.

Claim 10 (Original): A method as claimed in claim 1 wherein said activating radiation is a continuous waveform or is pulsed.

Claim 11 (Original): A method as claimed in claim 1 wherein the polarization of the dichroic layer is controlled by varying parameters selected from the group consisting of the incident angle of the activating radiation, the exposure energy density and the process temperature.

Claim 12 (Original): A method as claimed in claim 1 wherein the dichroic layer is formed on the substrate by a method selected from the group consisting of spin-coating, dipping, spraying, brushing, printing, Langmuir-Blodgett technique or thermal evaporation.

Claim 13 (Currently Amended): A polarizing material comprising a layer of [[a]] photochemically stable dichroic absorber ~~formed within a matrix of polymeric material selected from the group consisting of: polyimide, polyethylene, cellulose acetate, polystyrene, polycarbonate, polyester, polyacrylonitrile, polyacetal, polyacrylamide, polybutadiene, polyvinyl alcohol, polymethylmethacrylate, and polyvinylcinnamate molecules exhibiting photo-induced anisotropy upon the absorption of light.~~

Claim 14 (Canceled)

Claim 15 (Original): A polarizing material as claimed in claim 13 wherein said dichroic absorber is selected from the group consisting of: mono-, bis-, tris-, and poly-azo dyes, quinone dyes, mono- and poly-oxyanthraquinone dyes, sulfur-substituted hydroxythio-anthraquinone dyes, aminohydroxy-anthraquinone dyes, anthrapyrimidinone dyes, merocyanine dyes, azomethine dyes, polycyclic compounds, benzoquinones, napthoquinones, tolanes, diphenyls, p-nitroanilines, p-nitrosodialkylanilines, dialkylaminostyroles.

Claim 16 (Canceled)

Claim 17 (Original): A polarizing material as claimed in claim 13 wherein the polarizing material is provided with a coating of a material selected to alter the spectral response of said material.

Claim 18 (Original): A polarizing material as claimed in claim 17 wherein the selected material is iodine.

Claim 19 (New): A polarizing material according to claim 13, wherein said dichroic molecules are formed within a polymer matrix.

Claim 20 (New): A polarizing material according to claim 19, wherein the polymer matrix is formed of polymeric materials selected from the group consisting of: polyimide, polyethylene, cellulose acetate, polystyrene, polycarbonate, polyester,

polyacrylonitrile, polyacetal, polyacrylamide, polybutadiene, polyvinylalcohol,
polymethylmethacrylate, and polyvinylcinnamate.